

SYSTEMS, METHODS, AND COMPUTER PROGRAM PRODUCTS FOR STORING  
AND RETRIEVING PRODUCT AVAILABILITY INFORMATION  
FROM A STORAGE CACHE

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ABSTRACT OF THE INVENTION

The present invention provides methods for efficiently handling product  
availability queries. The present invention provides a local availability cache that is  
prepopulated with product availability listings from various product sources. Customer  
product availability queries are processed using the prepopulated availability cache, as  
10 opposed to independently querying each product source. The present invention also uses  
methods to manage the cache, such as by limiting the length of use data records stored for  
each start of use day to a maximum length of use and updating of data in the query using  
a function that updates data for start dates of use that occur sooner in time than for start  
dates of use that occur later in time. The present invention also uses functions to  
15 determine availability for length of use requests that exceed the maximum length of use  
stored in the cache by piecing together availability information for smaller lengths of use.

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